

WHAT IS CLAIMED IS:

1. An ink-jet recording head comprising: a substrate; a first conductive layer provided on the substrate; an insulating layer provided on the first conductive layer; a second conductive layer formed on the insulating layer and coming into contact with the first conductive layer; and a heat generation layer disposed on the second conductive layer and having, on a surface thereof, a self-oxidized protective film as an ink-contact interface.
2. An ink-jet recording head according to claim 1, wherein at least one of said first and second conductive layers is metal which includes, as a principal component, aluminum or aluminum alloy.
3. An ink-jet recording head according to claim 1, wherein said heat generation layer is a TaSiO film.
4. An ink-jet recording head comprising: a substrate; a first conductive layer provided on the substrate; an insulating layer provided on the first conductive layer; a second conductive layer formed on the insulating layer and coming into contact with said first conductive layer; and a heat generation layer disposed on said second conductive layer and having, on a surface thereof, a self-oxidized protective film as an ink-contact interface, wherein a portion is formed, which portion alleviates a stepped portion formed by an edge of said second conductive layer and said insulating layer.

5. An ink-jet recording head according to claim 4, wherein at least one of said first and second conductive layers is metal which includes, as a principal component, aluminum or aluminum alloy.
6. An ink-jet recording head according to claim 4, wherein said heat generation layer is a TaSiO film.
7. An ink-jet recording head according to claim 4, wherein said step-difference alleviating portion is formed by laminated insulating films comprised of different compositions formed on said second conductive layer.
8. An ink-jet recording cartridge equipped with an ink-jet recording head comprising: a substrate; a first conductive layer provided on the substrate; an insulating layer provided on the first conductive layer; a second conductive layer formed on the insulating layer and coming into contact with the first conductive layer; and a heat generation layer disposed on the second conductive layer and having, on a surface thereof, a self-oxidized protective film as an ink-contact interface.
9. An ink-jet recording cartridge according to claim 8, wherein, in the ink-jet recording head, a portion is formed, which portion alleviates a stepped portion formed by an edge of said second

conductive layer and said insulating layer.

10. An ink-jet recording device equipped with an ink-jet recording cartridge equipped with an ink-jet recording head comprising: a substrate; a first conductive layer provided on the substrate; an insulating layer provided on the first conductive layer; a second conductive layer formed on the insulating layer and coming into contact with the first conductive layer; and a heat generation layer disposed on the second conductive layer and having, on a surface thereof, a self-oxidized protective film as an ink-contact interface.

11. An ink-jet recording device according to claim 10, wherein, in the ink-jet recording head, a portion is formed, which portion alleviates a stepped portion formed by an edge of said second conductive layer and said insulating layer.